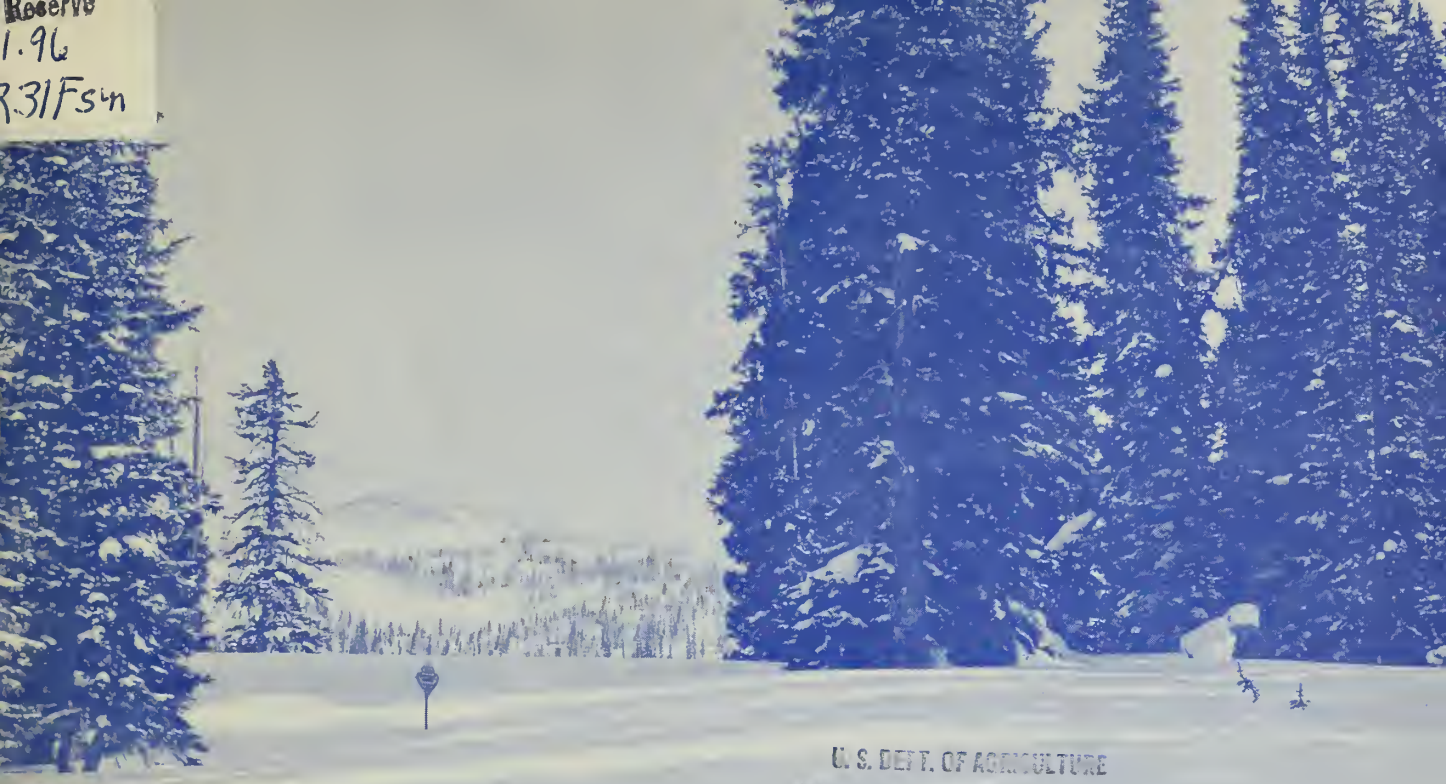

FALL WATER SUPPLY SUMMARY FOR NEVADA

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE.

and

NEVADA DEPARTMENT of CONSERVATION and NATURAL RESOURCES
DIVISION of WATER RESOURCES

AS OF
OCT. 1, 1968

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed on the last page of this report.

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states ariginates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflaw. Since the runoff fram precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this repart are based principally on measurement af the water equivalent of the mountain snawpack.

Forecasts become more accurate as mare af the data affecting runoff are measured. All forecasts assume that climatic factars during the remainder of the snow accumulatian and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A tatal of about ten samples are taken at each location. The average af these are reported as snow depth and water equivalent. These measurements are repeated in the same lacation near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a cantinuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data ar reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report far Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and starage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Sail Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained fram Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Partland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Sail Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phaenix, Arizona 85205
Calorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Bax 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 Federal Office Building, Spokane, Washington 99201
Wyaming	P. O. Box 340, Casper, Wyaming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reparts prepared by ather agencies include a report for Califarnia by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Bax 388, Sacramenta, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS-PORTLAND, OREG. 1966

WATER SUPPLY OUTLOOK FOR NEVADA

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

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FALL WATER SUPPLY SUMMARY

FOR NEVADA

October 1, 1968

As forecast, extremely low streamflow has been experienced throughout the state this past season. Water users depending on natural flow had a very poor year. In most areas of the state, the streams peaked two to three weeks earlier than normal, and the flows likewise fell off much earlier than usual. Water users served from reservoirs have had a fairly adequate water supply, due to last year's good reservoir carryover. The heavy reservoir usage to augment the low streamflow has left below-average amounts of water in storage in most of the reservoirs throughout the state.

Streamflow in the state ranged from a low of 9 to 19 percent on the Owyhee up to 73 percent on the Upper Carson River. The Humboldt River flowed less than 50 percent of average for the season. Above-normal June precipitation on the Humboldt added materially to the runoff this year. Had this area not received the welcome precipitation during June, the streams would have produced only one-fourth of the normal output.

The Walker and Carson River forecasts issed in April and May were very close to the actual flow obtained this year, while on the Tahoe-Truckee Basin, amounts less than the forecasts were received.

All in all, the forecasts issued last April provided, in advance, a sound basis for crop planning and water management.

Fall soil moisture surveys indicate that the mountain soils on the east slope of the Sierras are extremely dry. Soils in the Humboldt and Owyhee Basins are near average, however. This dry condition, coupled with the depleted reservoir storage, indicates the need for a normal or above-normal snowpack this coming winter season in order to insure an adequate water supply next season.

APRIL-JULY 1968
NEVADA STREAMFLOW FORECASTS
and
OBSERVED STREAMFLOW

The following table contains April-July forecasts made during the past winter, except as otherwise noted. Observed streamflow amounts are provisional and were furnished by the U. S. Geological Survey and other agencies.

	April-July Streamflow, Thousand Acre-Feet						
	Forecast				Observed		Observed
FORECAST STREAMS	Feb. 1 1968	Mar. 1 1968	Apr. 1 1968	May* 1 1968	Apr-July 1968	15-Yr. Av. 1948-62	1968 as % 15-Yr. Av.
Owyhee near Gold Creek, Nevada [1]	10	8	5	3 (2)	2	22	9
Owyhee near Owyhee, Nevada [1]	34	32	18	10 (11)	14	74	19
Lamoille Creek near Lamoille, Nevada		17	15	16 (20)	27	26	104
S. Fork Humboldt near Elko, Nevada		30	22	28 (38)	41	60	68
Marys River above Hot Springs Nevada		20	14	10 (10)	13	34	38
N. Fork Humboldt at Devils Gate, Nevada		13	8	6 (3)	4	34	12
Humboldt at Palisade, Nevada	90	75	45	35 (69)	81	173	47
Humboldt at Comus, Nevada		51	30	24 (43)	54	127	42
Martin Creek near Paradise, Nevada		7	5	3 (3)	5	17	29
E. Walker near Bridgeport, California [2]		40	34	18 (21)	23	57	40
W. Walker below E. Fork near Coleville, California	119	110	90	75 (77)	96	140	69
E. Carson near Gardnerville, Nevada		140	120	83 (92)	120	179	67
E. Carson near Gardnerville, Nevada (date of 200 c.f.s. flow)		7/12	7/6	6/30	7/3	7/20	
W. Carson at Woodfords, California		40	35	22 (25)	38	52	73
Carson near Carson City, Nevada		120	90	62 (68)	90	169	53
Carson at Ft. Churchill, Nevada		100	75	55 (57)	75	155	48
Little Truckee above Boca, California [3]		82	68	35 (24)	44	78	56
Truckee at Farad, California [3,4]		242	200	120 (76)	155	269	58
Lake Tahoe [3,5]		1.10	1.00	0.70(0.49)	0.61	1.47	41

1. Corrected for storage in Wild Horse Reservoir.
2. For period April through August corrected for storage in Bridgeport Reservoir.
3. Forecast issued by Truckee Basin Water Committee, which is composed of Truckee-Carson Irrigation District, Sierra Pacific Power Company, and Washoe County Conservation District.
4. Exclusive of Tahoe and corrected for storage in Boca and Prosser Reservoirs.
5. Maximum rise, in feet, from April 1, assuming gates closed.

* May 1-July 31, 1968, forecast; figures in parentheses provisional observed streamflow.

NEVADA

STATUS OF RESERVOIR STORAGE

OCTOBER 1, 1968

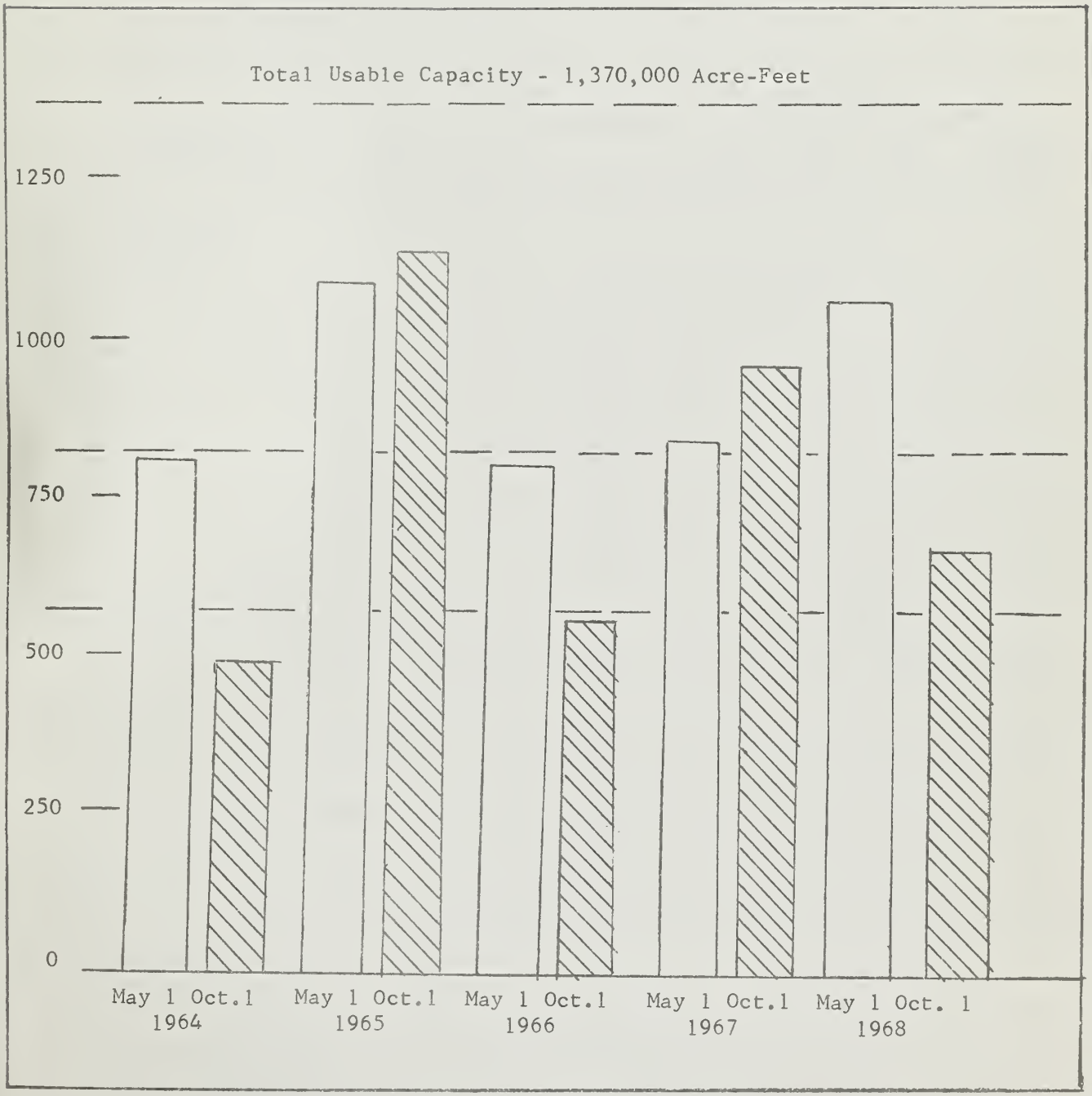
BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (1000 AF)	USABLE STORAGE - 1000 ACRE-FEET 1968	1967	1966	15-YR. AVG. 1948-62
Owyhee	Wild Horse	33	0 *	4	1	12
Lower Humboldt	Rye Patch	179	17	57	80	49
Colorado	Mohave	1,810	1,393	1,402	1,387	1,152 **
Colorado	Mead	27,217	15,018	14,375	15,004	19,307
Tahoe	Tahoe	732	514	606	406	391
Truckee	Boca	41	13	26	2	13
Truckee	Prosser	29 ***	12	19	9	Storage began 1/30/63
Carson	Lahontan	286	90	202	57	80
West Walker	Topaz	59	8	41	6	14
East Walker	Bridgeport	42	7	29	6	12

* Reservoir drained during summer for construction.
** 1951-62
*** Flood control use allocation of 20,000 acre-feet between November 1 and April 10.

NEVADA RESERVOIR STORAGE
1964-1968

Based on Wild Horse, Rye Patch, Tahoe,

Boca, Lahontan, Topaz, and Bridgeport Reservoir Storage Data



NEVADA

SOIL MOISTURE

OCTOBER 1, 1968

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
Name	Elevation	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
East Slope Sierra							
Hagans Meadow	8000	36	3.65	9/16	0.0	0.4	0.0
Independence Camp	7000	34	6.10	9/6	3.4	3.1	4.4
Marlette Lake	8000	50	3.70	9/5	0.6	1.2	0.5
Sonora Pass	8800	48	8.30		NS	7.4	6.8
Truckee #2	6400	18	3.65	9/16	0.0	0.6	1.5
Ward Creek	7000	49	5.80	9/6	0.6	1.1	---
Humboldt Basin							
Rodeo Flat	6800	42	11.0	8/29	10.5	9.9	10.1
Owyhee Basin							
Big Bend	6700	48	16.70	8/29	15.8	15.0	15.0
Lower Jack Creek	6800	48	8.70	9/20	7.8	7.3	---
Taylor Canyon	6200	48	15.10	8/29	12.6	11.3	10.6

NS Not Surveyed

Agencies Cooperating in Collecting Data Contained in this Bulletin

FEDERAL

- Agricultural Research Service
- Army
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- Geological Survey
- Navy
- Soil Conservation Service
- U.S. District Court - Federal Water Master
- Weather Bureau

STATE

- California Cooperative Snow Surveys
- California Department of Parks and Recreation
- California Department of Water Resources
- Colorado River Commission of Nevada
- Idaho Cooperative Snow Surveys
- Nevada Association of Soil Conservation Districts
- Nevada Cooperative Snow Surveys
- Nevada Department of Conservation & Natural Resources
  - Division of Water Resources
  - Nevada State Forester-Firewarden
- Oregon Cooperative Snow Surveys
- University of Nevada
- Utah Cooperative Snow Surveys
- White Mountain Research Station, Univ. of California

PRIVATE

- Amalgamated Sugar Company
- Kennecott Copper Corporation
- Nevada Irrigation District
- Owyhee Project North Board of Control
- Owyhee Project South Board of Control
- Pacific Gas & Electric Company
- Pershing County Water Conservation District
- Sierra Pacific Power Company
- Squaw Valley Development Company
- Truckee-Carson Irrigation District
- Walker River Irrigation District
- Washoe County Water Conservation District

Other organizations and individuals furnish valuable information for the snow survey reports. Their Cooperation is gratefully acknowledged.

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